

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/581,036

08/08/00

JEPSON

I

FPD50288UST

HALE AND DORR LLP
60 STATE STREET
BOSTON MA 02109

HM22/1005

EXAMINER

KUBELIK, A

ART UNIT

PAPER NUMBER

1638

DATE MAILED:

10/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/581,036

Applicant(s)

JEPSON ET AL.

Examiner

Anne Kubelik

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-2, 4, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding a sucrose sensing protein operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group II, claims 1-2, 4, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding a sucrose transport protein operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group III, claims 1-2, 4-5, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding a sucrose synthase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group IV, claims 1-2, 4-5, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding a phosphofructokinase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Art Unit: 1638

Group V, claims 1-2 and 4-16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding an invertase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group VI, claims 1-2, 4-5, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding a hexokinase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group VII, claims 1-2, 4-5, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding an inorganic pyrophosphorylase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group VIII, claims 1-2, 4-5, 7-14 and 16, drawn to a method of increasing the yield of a plant by transformation with a construct comprising a gene encoding an ATPase operably linked to a controllable promoter, DNA constructs used in the method, and plants produced by the method.

Group IX, claim 3, drawn to a method of controlling the flowering behavior of a plant by transformation with a construct comprising a gene encoding a sucrose sensing protein operably linked to a controllable promoter.

Group X, claim 3, drawn to a method of controlling the flowering behavior of a plant by transformation with a construct comprising a gene encoding a sucrose transport protein operably linked to a controllable promoter.

Group XI, claim 3, drawn to a method of controlling the flowering behavior of a plant by transformation with a construct comprising a gene encoding a sucrose metabolism protein operably linked to a controllable promoter.

Group XII, claim 3, drawn to a method of controlling the flowering behavior of a plant by transformation with a construct comprising a gene encoding a sucrose uptake protein operably linked to a controllable promoter.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The technical feature linking groups I-XII appears to be that they all involve transformation with a construct comprising a gene involved in sucrose metabolism operably linked to a controllable promoter. However, Bennett et al (1997, US Patent 5,658,773) teach DNA constructs encoding invertase, which is involved in sucrose metabolism, linked to an inducible, and therefore controllable, promoter (claim 2). Therefore, the technical feature linking the inventions of groups I-XII is not special, the groups are not so linked, and these inventions do not constitute an advance over the prior art. Additionally, the claimed methods produce different products and/or different results that are not coextensive or the claimed methods have different modes of operation, and thus do not share the same technical feature.

Inventions I-VIII are unrelated to inventions IX-XII. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions and different effects. The methods

Art Unit: 1638

of inventions I-VIII require methods of analyzing the yield of a plant, not required by the inventions IX-XII. The methods of inventions IX-XII require analysis of flowering behavior, not required by the inventions I-VIII.

Inventions I-VIII are unrelated to each other. In the instant case the different inventions have different modes of operation. The methods of each invention require genes not required by each other invention.

Inventions IX-XII are unrelated to each other. In the instant case the different inventions have different modes of operation. The methods of each invention require genes not required by each other invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and fields of search, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 1638

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (703) 308-5059.

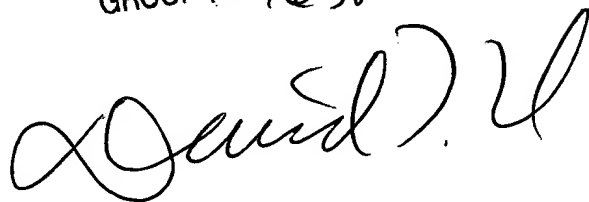
The examiner can normally be reached on Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula K. Hutzell, can be reached on (703) 308-4310. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Anne R. Kubelik, Ph.D.
October 3, 2001

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180 1638

A handwritten signature in black ink, appearing to read "David T. Fox", written in a cursive style.